

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A multireactive polymerizable mesogenic compound of formula I



wherein

R^1 is halogen, CN, OCN, NCS, NO_2 or an alkyl radical with 1 to 30 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH_2 groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, or alternatively has one of the meanings of R^2 or is P-(Sp-X)_n,

P is a polymerizable group selected from $CH_2=CW-COO-$, $WCH=CH-O-$,

$CH_2=CH-Phenyl-(O)_k-$ and $WHC \begin{array}{c} O \\ \diagup \quad \diagdown \\ \text{---} \quad \text{---} \end{array} CH-$, with W being H, CH₃ or Cl and k being 0 or 1,

Sp is a spacer group with 1 to 25 C atoms,

X is -O-, -S-, -CO-, -COO-, -OCO-, -OCO-O-, -CO-NH-,
-NH-CO-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-COO-,
-OOC-CH=CH- or a single bond,

n is 0 or 1,

MG is a mesogenic group of formula II



wherein

Z is -O-, -S-, -CO-, -COO-, -OCO-, -CO-NH-, -NH-CO-,

-CH₂CH₂-, -OCH₂-, -CH₂O-, -SCH₂-, -CH₂S-, -CH=CH-,

-CH=CH-COO-, -OCO-CH=CH-, -C≡C- or a single bond,

A¹ and A² are each independently 1,4-phenylene in which, in addition, one or more CH groups are optionally replaced by N; 1,4-cyclohexylene in which, in addition, one or two non-adjacent CH₂ groups are optionally replaced by O and/or S; 1,4-cyclohexenylene; 1,4-bicyclo(2,2,2)octylene; piperidine-1,4-diyl; naphthalene-2,6-diyl; decahydronaphthalene-2,6-diyl; or 1,2,3,4-tetrahydro-naphthalene-2,6-diyl; all these groups optionally being unsubstituted, mono- or polysubstituted with F, Cl, OH, CN, NO₂ or alkyl, alkoxy, alkylcarbonyl or alkoxycarbonyl groups having 1 to 7 C atoms wherein one or more H atoms may be substituted by F or Cl, and

m is 1, 2 or 3, and

R² is ~~straight chain or branched~~ alkyl with 1 to 25 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH₂ groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, and which is substituted with at least two identical or different groups P.

2. **(Previously presented)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R^1 is not a polymerizable group.
3. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R^1 has one of the meanings of R^2 .
4. – 5. **(Canceled)**
6. **(Original)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R^2 is substituted with 2, 3, 4 or 5 identical or different polymerizable groups P.
7. **(Currently Amended)** A multireactive polymerizable mesogenic compound according to claim 1, wherein R^2 is a group of one of the following formulae
- | | |
|--|----|
| -X-alkyl-CHP ¹ -CH ₂ -CH ₂ P ² | Ia |
| -X-alkyl-C(CH ₂ P ¹)(CH ₂ P ²)-CH ₂ P ³ | Ib |
| -X-alkyl-CHP ¹ CHP ² -CH ₂ P ³ | Ic |
| -X-alkyl-C(CH ₂ P ¹)(CH ₂ P ²)-C _a H _{2a+1} | Id |
| -X-alkyl-CHP ¹ -CH ₂ P ² | Ie |
| -X-alkyl-CHP ¹ P ² | If |
| -X-alkyl-CP ¹ P ² -C _a H _{2a+1} | Ig |
| -X-alkyl-C(CH ₂ P ¹)(CH ₂ P ²)-CH ₂ OCH ₂ -C(CH ₂ P ³)(CH ₂ P ⁴)CH ₂ P ⁵ | Ih |
| -X-alkyl-CH((CH ₂) _a P ¹)((CH ₂) _b P ²) | Ii |
| -X-alkyl-CHP ¹ CHP ² -C _a H _{2a+1} | Ik |

wherein

alkyl is ~~straight-chain or branched~~ alkylene with 1 to 12 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, one or more non-adjacent CH₂ groups optionally being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another,

a and b are identical or different integers from 0 to 6,

X has one of the meanings given in formula I, and

P¹ to P⁵ independently have one of the meanings of P given in formula I.

8. (Canceled)

9. (Previously presented) A multireactive polymerizable mesogenic compound according to claim 7, wherein alkyl is -(CH₂)_c-, with c being an integer from 1 to 12.

10. (Original) A multireactive polymerizable mesogenic compound according to claim 1, wherein each P is independently of each other acrylate, methacrylate, vinyl, vinyloxy, epoxy or p-vinylphenoxy.

11. – 17. (Canceled)

18. (Previously presented) A multireactive polymerizable mesogenic compound according to claim 1, wherein MG is a group of one of the following formulae II-1 to II-25 or a mirror image thereof:

| | |
|----------------------|-------|
| -Phe-Z-Phe- | II-1 |
| -Phe-Z-Cyc- | II-2 |
| -Cyc-Z-Cyc- | II-3 |
| -PheL-Z-Phe- | II-4 |
| -PheL-Z-Cyc- | II-5 |
| -PheL-Z-PheL- | II-6 |
| -Phe-Z-Phe-Z-Phe- | II-7 |
| -Phe-Z-Phe-Z-Cyc- | II-8 |
| -Phe-Z-Cyc-Z-Phe- | II-9 |
| -Cyc-Z-Phe-Z-Cyc- | II-10 |
| -Phe-Z-Cyc-Z-Cyc- | II-11 |
| -Cyc-Z-Cyc-Z-Cyc- | II-12 |
| -Phe-Z-Phe-Z-PheL- | II-13 |
| -Phe-Z-PheL-Z-Phe- | II-14 |
| -PheL-Z-Phe-Z-Phe- | II-15 |
| -PheL-Z-Phe-Z-PheL- | II-16 |
| -PheL-Z-PheL-Z-Phe- | II-17 |
| -PheL-Z-PheL-Z-PheL- | II-18 |
| -Phe-Z-PheL-Z-Cyc- | II-19 |
| -Phe-Z-Cyc-Z-PheL- | II-20 |
| -Cyc-Z-Phe-Z-PheL- | II-21 |
| -PheL-Z-Cyc-Z-PheL- | II-22 |
| -PheL-Z-PheL-Z-Cyc- | II-23 |
| -PheL-Z-Cyc-Z-Cyc- | II-24 |
| -Cyc-Z-PheL-Z-Cyc- | II-25 |

wherein Phe is 1,4-phenylene, PheL is a 1,4-phenylene group which is substituted by 1 to 4 groups L, with L being F, Cl, CN, OH, NO₂ or an optionally fluorinated alkyl, alkoxy or alkanoyl group with 1 to 7 C atoms, Cyc is 1,4-cyclohexylene and Z are independently -O-,

-S-, -CO-, -COO-, -OCO-, -CO-NH-, -NH-CO-, -CH₂CH₂-, -OCH₂-, -CH₂O-, -SCH₂-,
-CH₂S-, -CH=CH-, -CH=CH-COO-, -OCO-CH=CH-, -C≡C- or a single bond.

19. (Currently Amended) A multireactive polymerizable mesogenic compound according to claim 1, wherein Sp is ~~a linear or branched~~ an alkylene group having 1 to 20 C atoms, in which one or more non-adjacent CH₂ groups are optionally replaced by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -O-CO-, -S-CO-, -O-COO-, -CO-S-, -CO-O-, -CH(halogen)-, -CH(CN)-, -CH=CH- or -C≡C-.

20. (Previously presented) A multireactive polymerizable mesogenic compound according to claim 1, wherein R¹ is a chiral alkyl radical with 1 to 30 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, optionally one or more non-adjacent CH₂ groups being replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH₃)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S-, -CH=CH- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another.